AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/944,981

Filing Date: August 30, 2001

CRYSTALLINE OR AMOPHOUS MEDIUM-K GATE OXIDES, Y203 AND Gd203

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(New) The method of claim 61, wherein evaporation depositing the metal layer includes evaporation depositing by electron beam evaporation.

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on August 12, 2002, and the references cited therewith.

No claims are amended, no claims are canceled, and claims 61-63 are added; as a result, claims 1-29, and 54-63 are now pending in this application.

§103 Rejection of the Claims

Claims 1-7, 14-20, 22-28, 54-56, and 58-60 were rejected under 35 USC § 103(a) as being unpatentable over Maiti et al. (U.S. 6,020,024) in view of Saito et al. (U.S. 4,797,593).

Applicant does not admit that Maiti is indeed prior art and reserves the right to swear behind this reference at a later date. Nevertheless the Applicant believes that the present invention is distinguishable from the Maiti reference for the following reasons.

The rejection states that, "In addition to the deposition of metal oxide gate dielectric layer using CVD, it is possible to deposit a metal layer by sputtering and subsequently perform an oxidation step on the deposited layer and also perform CVD of a metallic oxide to form a composite metal layer." The rejection further states, "Saito discusses a method of depositing a metal oxide layer through evaporation."

Maiti appears to show a CVD or alternatively a sputtering deposition method used to deposit a metal layer used to form a gate oxide. However, Maiti does not show, teach or suggest evaporation depositing a metal layer on the body region. Maiti does not appear to recognize the advantages of using an evaporation depositing technique as discussed in Applicant's specification. For example, on page 7, lines 10-29, the specification discusses processing advantages such as the high purity of available starting materials in evaporation depositing; amorphous deposition; a smooth interface in combination with a thin deposited layer; and low substrate processing temperature. Applicant's specification teaches away from techniques such as sputtering on page 3, lines 12-21, while Maiti appears to equate sputtering with CVD. In



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contrast, Applicant's independent claims each include evaporation depositing a metal layer on the body region.

Regarding the Saito reference, Applicant respectfully submits that Saito is not analogous art to the present application, and that Saito further does not provide a motivation to combine with the Maiti reference.

Analogous art is all art that is either in the field of technology of the claimed invention or deals with the same problem solved by the claimed invention even though outside the field of technology. In re Wood, 599 F.2d 1032, 202 USPQ 171 (CCPA 1979). Saito describes a device and method to form an electron tube. In contrast, Applicant's claims recite formation of a gate oxide on a body region. Applicant respectfully submits that one skilled in the art would not look to electron tube formation technology to form gate oxides.

Further, Applicant respectfully submits that Saito does not provide any motivation to combine with Maiti. The Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. In re Sang Su Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). In fact, Applicant notes that the Saito reference teaches away from utilizing evaporation depositing in place of techniques such as sputtering, as taught by Applicant's specification. The Saito reference indicates that the methods are interchangeable when it states that "the rare earth metal layer 5b is formed by an electron beam evaporation method or a sputtering method," (col. 9, lines 62-63). Thus Saito fails to appreciate the advantages taught by the Applicant.

Because the Maiti reference alone does not show every element of Applicant's independent claims, and because the Saito reference cannot be combined with the Maiti reference, a 35 USC § 103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's independent claims 1, 14, 22, 54, and 58. Additionally, reconsideration and withdrawal of the rejection is respectfully requested with respect to the remaining claims that depend therefrom as depending on allowable base claims.

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Allowable Subject Matter

Claims 8, 21, 29 and 57 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant acknowledges and thanks the Examiner for indication of allowability of claims 8, 21, 29 and 57. Pursuant to the arguments presented above, Applicant has not rewritten claims 8, 21, 29 and 57 in independent form at this time. Applicant respectfully submits that base claims 1, 14, 22, and 54 are in condition for allowance, thus removing the necessity to rewrite claims 8, 21, 29 and 57.

Applicant respectfully submits that the base claims (1, 14, 22, 30, and 51) have been amended, and are now in condition for allowance pursuant to arguments presented above. Therefore, no amendments have been made to the claims that have been objected to.

Claims 9-13 were allowed. Applicant acknowledges and thanks the Examiner for allowance of these claims.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-373-6944) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 12 day of November, 2002.

Name

Amy Moriarty

Signature